

University of Groningen

Workshop on SHaring and Reusing architectural Knowledge (SHARK 2011)

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Published in:
2011 33RD INTERNATIONAL CONFERENCE ON SOFTWARE ENGINEERING (ICSE)

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Document Version
Publisher's PDF, also known as Version of record

Publication date:
2011

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Avgeriou, P., Lago, P., & Kruchten, P. (2011). Workshop on SHaring and Reusing architectural Knowledge (SHARK 2011). In *2011 33RD INTERNATIONAL CONFERENCE ON SOFTWARE ENGINEERING (ICSE)* (pp. 1220-1221). University of Groningen, Johann Bernoulli Institute for Mathematics and Computer Science.

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Workshop on SHaring and Reusing architectural Knowledge (SHARK 2011)

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ABSTRACT

Architectural Knowledge (AK) is defined as the integrated representation of the software architecture of a software-intensive system or family of systems along with architectural decisions and their rationale, external influence and the development environment. The SHARK workshop series focuses on current methods, languages, and tools that can be used to extract, represent, share, apply, and reuse AK, and the experimentation and/or exploitation thereof. This sixth edition of SHARK will discuss, among other topics, the approaches for AK personalization, where knowledge is not codified through templates or annotations, but it is exchanged through the discussion between the different stakeholders.

Categories and Subject Descriptors

D.2.11 [Software Engineering]: Software Architecture.

General Terms

Management, Documentation, Design, Human Factors, Standardization, Languages, Theory.

Keywords

Software Architecture, Knowledge Management.

1. INTRODUCTION

Software architecture is crucial to manage the complex interactions and dependencies between the stakeholders and to provide a central artifact that can be used as a reference by them. Modern design and documentation approaches to software architecture shifted their focus from plain components and connectors to the design decisions that resulted in the architecture as well as the organizational, process and business drivers and rationale underlying them. This workshop focuses on current architectural knowledge (AK) management approaches: methods, languages, notations, tools to extract, represent, and share AK.

The AK community is comprised of both researchers and industrial practitioners that are involved in a wide variety of

fields, disciplines and application domains [1]. The SHARK workshop is a meeting place for this community, which has grown and matured over the last five years. In its past editions, the workshop explored the state of the art and practice in the field [2], a research agenda driving future R&D [3], emerging approaches of AK in a broader context [4], and how to reorganize and codify the body of knowledge of the software architecture community [5].

In this sixth edition of SHARK [6], we proposed to the community to investigate the approaches for AK personalization, where knowledge is not codified through templates or annotations, but it is exchanged through the discussion between the different stakeholders. Therefore, the emphasis does not lie on resource-intensive documentation but on lightweight, just-in-time conversations facilitated by 'knowledge yellow pages' (who knows what). The AK community has not explored AK personalization in depth, even though it has acknowledged its value as a viable approach [7, 8, 9].

2. ACCEPTED PAPERS

Selection of the submissions was based on peer-review by 3 members of the program committee. Papers were chosen based on their innovative ideas for this field, and their ability to stimulate discussion during the workshop. We have accepted 6 full papers and 1 poster, which deal with the following three major topics: communicating, sharing and using AK; modeling and visualizing AK; and AK related tools.

While the first topic naturally addresses soft skills and personalization aspects of AK management, the other two are more central to codification. Nevertheless, these papers illustrate how codification strategies successfully support activities related to architecting and their complementarity with personalization techniques will be discussed.

The accepted papers demonstrate an exceptionally good balance between industrial and academic research, which is an accurate representation of the SHARK community and is promising for fruitful and challenging discussions. The SHARK workshop has a long tradition of intensive interactive discussions, which we plan to keep. We will cluster the participants in working groups addressing specific themes. In the two morning sessions, the authors of the accepted papers will be invited to give short position statements. The organizers will prepare in advance questions for the presentations and discussion topics for the break-out thematic groups. The thematic groups will be moderated by the organizers and other experts if necessary. A post-mortem report of the results of the working groups will be

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ICSE'11, May 21–28, 2011, Waikiki, Honolulu, HI, USA
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published and disseminated in the community. Candidate topics for the thematic groups include the following:

- Methods and tools for AK personalization
- Hybrid approaches: making the best of both personalization and codification
- Industrial case studies of AK personalization
- Applying knowledge management theory on knowledge personalization

3. REFERENCES

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